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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHO, HONG SOL

ART UNIT PAPER NUMBER

2616

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,622

Applicant(s)

BESER, NURETTIN BURCAK

Examiner

Hong Cho

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11 and 37-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11 and 37-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 1/23/2006. Claims 1-10 and 12-36 were canceled. Claims 11 and 37-52 are pending in the instant application.

Drawings

2. New corrected drawings are required in this application because figures 11-14 are not readable. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112, First paragraph

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2616

4. Claims 11, 37, 38, 45 and 52 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re claims 11, 45 and 52, the original specification fails to explain how to covert each of bandwidth allocation requests into a mini-slot size based on a modulation and symbol rate associated with the bandwidth allocation requests.

Claims 37 and 38 depend from claim 11 are therefore similarly rejected.

Claim Rejections - 35 USC § 112, Second paragraph

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 11, 37, 38, 42, 43, 45, 49, 50 and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claims 11, 45 and 52, it is not clear what is meant by “converting each of bandwidth allocation requests into a mini-slot size based on a modulation and symbol rate...”. It cannot be seen how requests are converted to mini-slot size.

Re claims 42 and 49, it is not clear what is meant by “sending a message on each of the different virtual stream channels that allocates upstream bandwidth”. It cannot be seen how each channel allocates upstream bandwidth.

Claims 37, 38, 43 and 50 depend from claims 11, 42 and 49 are therefore similarly rejected.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 11 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Vogel (U.S. 6785292).

Re claim 11, Vogel discloses receiving transmission requests from cable modems (*receiving bandwidth allocation requests from cable modems*, column 7, lines 28-32), allocating mini-slots to each of the cable modems according to symbol rate and modulation type (*converting each of bandwidth allocation requests into a mini-slot size based on a modulation and symbol rate associated with the bandwidth allocation requests*, column 7, lines 31-33; column 9, lines 20-26), and scheduling transmission on mini-slots of an upstream channel (*scheduling transmission on a physical upstream channel from cable modems associated with each of the bandwidth allocation requests based on a respective mini-slot size*, column 7, lines 31-36).

Re claim 37, Vogel discloses dividing an upstream channel into a stream of mini-slots associated with symbol rate and modulation type (*segregating the physical upstream channel into multiple virtual upstream channels, wherein each of the multiple virtual upstream channels is associated with a different modulation and symbol rate*, column 7, lines 24-26; column 9, lines 23-26).

Claims 39-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Ruszczyk et al (U.S 6940874), hereinafter referred to as Ruszczyk.

Re claims 39 and 46, Ruszczyk discloses grouping the cable modems into a plurality of groups (column 1, lines 26-29) and allocating one or more transmission mini-slots to each of the cable modems (*assigning one of the multiple virtual upstream*

channels to each of the plurality of groups, column 7, lines 32-33). Ruszczyk discloses dividing an upstream channel into a stream of mini-slots associated with symbol rate and modulation type (*each of the multiple virtual upstream channels is associated with a different modulation and symbol rate*, column 7, lines 24-26; column 9, lines 23-26).

Re claims 40 and 47, Ruszczyk discloses grouping the cable modems into a plurality of groups (column 1, lines 26-29) based on geographic location (*latency*).

Re claims 41 and 48, Ruszczyk discloses checking a service identifier field of a request message sent from a cable to identify registered cable modem (*differentiating slower cable modems from faster cable modems*, column 7, lines 43-66) and informing cable modems of the allocation of mini-slots for a scheduled upstream usage interval and when to begin the usage interval (*assigning bandwidth to the cable modems based on the differentiation such that the slower cable modems are allowed to transmit data more frequently than faster cable modems*, column 8, lines 49-56).

Re claims 42 and 49, Ruszczyk discloses transmitting data on mini-slots of an upstream channel (*sending a message on each of the different virtual upstream channels that allocates upstream bandwidth*, column 7, lines 29-32).

Re claims 43 and 50, Ruszczyk discloses cable modems transmitting data on allocated mini-slots by cable modem termination system (CMTS) (*each message pertains to cable modems of a group of the plurality of groups assigned to a respective virtual upstream channel*, column 8, lines 5-9).

Re claims 44 and 51, Ruszczyk discloses transmitting a message with mini-slot size field (*each virtual upstream channel is associated with a different mini-slot size*, column 10, lines 30-34).

Re claims 45 and 52, Ruszczyk discloses receiving transmission requests from cable modems (*receiving bandwidth allocation requests from cable modems*, column 7, lines 28-32), allocating mini-slots to each of the cable modems according to symbol rate and modulation type (*converting each of bandwidth allocation requests into a mini-slot size based on a modulation and symbol rate associated with the bandwidth allocation requests*, column 7, lines 31-33; column 9, lines 44-51), and scheduling transmission on mini-slots of an upstream channel (*scheduling transmission on a physical upstream channel from cable modems associated with each of the bandwidth allocation requests based on a respective mini-slot size*, column 7, lines 31-36).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel in view of Ruszczyk.

Re claim 38, Vogel discloses allocating one or more transmission mini-slots to each of the cable modems (*assigning one of the multiple virtual upstream channels to each of the plurality of groups*, column 7, lines 32-33) but fails to disclose grouping the cable modems into a plurality of groups. Ruszczyk discloses grouping the cable modems into a plurality of groups (column 1, lines 26-29). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Vogel to segregate number of cable modems into a plurality of groups so that different upstream transmission parameters would be assigned to each cable modem to provide better quality of service to customers.

Response to Arguments

11. Applicant's arguments with respect to claims 11, 39 and 46 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

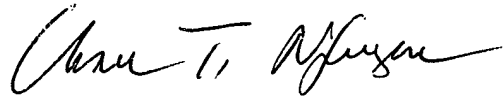
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc
Hong Cho
Patent Examiner
3/30/2006



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